



MONITORING NETWORK PLAN 2025



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1.0 Background

Federal Regulations (40 CFR 58.10) require that State and Local Agencies operating an ambient air quality monitoring network shall review their air quality monitoring network on an annual basis. Any needed modifications to the network should be identified. A detailed monitoring network description should also be included. In addition, the plan shall be available for public comment. MDEQ's Monitoring Network Plan is available on the MDEQ website at <http://www.deq.state.ms.us>.

The Monitoring Network review that is specified in *40 CFR 58.10* contains the following elements that apply to each monitoring site:

- The Air Quality System (AQS) site identification number.
- The location, including street address and geographical coordinates.
- The sampling and analysis method(s) for each measured parameter.
- The operating schedules for each monitor.
- Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal.
- The monitoring objective and spatial scale of representativeness for each monitor as defined in appendix D of part 58.
- The identification of any sites that are suitable and sites that are not suitable for comparison against the annual Particulate Matter (PM)_{2.5} and Ozone National Ambient Air Quality Standards (NAAQS) as described in part 58.30.
- The Metropolitan Statistical Area (MSA), Core Based Statistical Area (CBSA), Consolidated Statistical Area (CSA) and other areas represented by the monitor.
- The annual monitoring network plans and or periodic network assessments are subject to Regional approval according to part 58.14.

2.0 Overview

In the State of Mississippi, the Mississippi Department of Environmental Quality (MDEQ) is the only agency operating an ambient air quality network. There are no local agencies. In Mississippi, as in other State agencies, network monitors are operated for a variety of monitoring objectives. These objectives include determining if an area of the State meets the NAAQS, for public information such as the Environmental Protection Agency (EPA) AirNow data mapping web site, Air Quality Index (AQI) reporting for public information, background data collection, spatial considerations, and special projects. The AQI forecast is currently reported for the Jackson Metro area, Biloxi/Gulfport area and DeSoto County area on the MDEQ web site at <https://www.mdeq.ms.gov/air/air-quality-forecast/>. In addition, hourly Ozone (O₃), Particulate Matter (PM), Nitrogen Dioxide (NO₂), Sulfur Dioxide (SO₂), and Carbon Monoxide (CO) data is reported to the EPA AirNow website, if applicable. Note: MDEQ initiated the EPA approved correction factor for all the Teledyne API T640/T640x particulate matter instruments in MDEQ's monitoring network. The data collection start-up date utilizing the correction factor began January 01, 2024.

All site data (except for the Pascagoula Cherokee site) are suitable for the NAAQS comparisons per appendices A, C, D, and E. MDEQ's Quality Management Plan (QMP) is current with an approval date of 10/03/2019, while the Criteria Pollutants Quality Assurance Project Plan (QAPP) has an EPA

approval date of 11/17/2023. The QMP is currently being reviewed and, if needed, revised. MDEQ's SOPs were updated, reviewed, and accepted/adopted by EPA as follows: Ozone- 4/6/2023, SO₂- 4/6/2023, CO- 4/6/2023, NO₂- 4/6/2023, NO_y-4/6/2023, FRM PM_{2.5}- 11/28/2022, T640 and T640x- 11/28/2022, Carbon- 8/11/2011, Speciation- 7/27/2011, Data Handling and Data Validation- 4/6/2023, API Calibrators- 4/6/2023 and IML PM_{2.5} Gravimetric Lab- 5/17/2021.

40 CFR 58 has set minimum monitoring requirements for the pollutants that are to be compared with the NAAQS. These minimum requirements are based on population, the level of monitored pollutants, and MSA as defined in the latest US Census information (See 10.0 for the US Census information). The tables below and the discussion on the following pages summarize this information.

3.0 Site Discussion

Mississippi's air quality monitoring network has been reviewed based on the historic monitoring data, air quality monitoring regulations, data representation based on spatial considerations, special data needs and changes needed based on the monitoring regulations. The items used in the evaluation were the AQS database, the 40 Code of Federal Regulations (CFR) parts 53 and 58 documents, census data and maps. All monitors operated by MDEQ are State and Local Air Monitoring Stations (SLAMS) except for the Pascagoula Cherokee Monitoring Station.

The following sections describe the purposes and any changes related to each site in the ambient air monitoring network in the State of Mississippi based on our review of existing monitoring efforts.

4.0 Metropolitan Statistical Area (MSA)-NON MSA

Memphis MSA:

1. **Hernando** (DeSoto Co. 28.033.0002) – MDEQ operates an O₃ monitor, and a continuous Federal Equivalent Method (FEM) PM_{2.5} monitor at this site that is designated as a transport monitor and therefore is a required monitor. MDEQ has a Regional Monitoring Agreement (RMA) with Shelby County, TN Health Department, and Arkansas Department of Energy and Environment Division of Environmental Quality to meet Appendix D requirements section 2, e. A copy of this agreement is attached (See Section 11.0) and is on file at EPA Region 4. MDEQ has no plans to change the current monitoring efforts at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. See Appendix A for a summary of MDEQ's siting criteria information.
 - **Sampling train:** The probe tubing is Fluorinated Ethylene Propylene (FEP), and the probe fittings are Perfluoroalkoxy (PFA). The stainless-steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel. See Appendix A for a summary of MDEQ's O₃ Residence Time.

Jackson MSA:

1. **Jackson NCore** (Hinds Co. 28.049.0020) – The NCore site contains a full complement of monitors, including meteorological. The monitoring parameters currently include O₃, SO₂, CO, Nitric Oxides as NO_y, manual Federal Reference Method (FRM) PM_{2.5}, continuous FEM PM_{2.5}, continuous FEM PM₁₀, FEM PM_{10-2.5}, speciated PM_{2.5}, wind speed, wind direction, ambient temperature, and relative humidity. The FEM PM_{2.5} continuous monitor operates as the primary PM_{2.5} monitor

while the FRM PM_{2.5} will operate 1/3-day. MDEQ has no plans to change the current monitoring efforts at this site.

- **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. See Appendix A for a summary of MDEQ's Jackson NCore siting criteria information.
- **Sampling train:** The probe tubing is FEP, and the probe fittings are PFA. The stainless-steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel. See Appendix A for a summary of MDEQ's O₃, SO₂, CO Residence Time.

2. **Jackson Metro MSA** (Hinds Co. 28.049.0021) – MDEQ operates an O₃ monitor, and a continuous FEM PM_{2.5} monitor at this site. MDEQ has no plans to change the current monitoring efforts at this site.

- **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. See Appendix A for a summary of MDEQ's Hinds Co. siting criteria information.
- **Sampling train:** The probe tubing is FEP, and the probe fittings are PFA. The stainless-steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel. See Appendix A for a summary of MDEQ's O₃ Residence Time.

Hattiesburg MSA:

1. **Hattiesburg** (Forrest Co. 28.035.0004) – MDEQ operates a continuous FEM PM_{2.5} monitor at this site. In addition, a collocated FRM PM_{2.5} monitor will continue to operate on a 1/6-day schedule to meet MDEQ's collocated requirements. MDEQ has no plans to change the current monitoring efforts at this site.

- **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. See Appendix A for a summary of MDEQ's Hattiesburg siting criteria information.

Gulfport-Biloxi-Pascagoula MSA:

1. **Gulfport** (Harrison Co. 28.047.0008) – MDEQ operates an ozone monitor, and a continuous FEM PM_{2.5} monitor at this site. MDEQ has no plans to change the current monitoring efforts at this site.

- **Site Approval Status:** MDEQ installed a new monitoring shelter that was placed next to the old monitoring shelter. MDEQ received verbal (01/03/2024) and email approval (01/04/2024), from EPA to reconfigure this site. The existing (old building) was shut down on 03/12/2024. The newly reconfigured Gulfport site began collecting data on 03/13/2024. Below is a summary of this reconfiguration:
 1. Relocated the T640 PM and ozone instruments from the current (old) monitoring building to the new one.
 2. Moved the sample probes approximately 25 feet south from the current building to the new sampling probe location.
 3. Set the ozone probe height on the new building at approximately 4.10 meters from the ground.

4. Established the T640 sample head height on the new building at approximately 4.0 meters from the ground.
5. Placed each probe on top of the new building, maintaining the same configuration as the old building.
6. The old Gulfport building GPS coordinates: Latitude 30.390127 degrees - Longitude 89.049714 degrees.
7. The reconfiguration/new building GPS coordinates: Latitude 30.390083 degrees - Longitude 89.049709 degrees.
8. The distance (new building) to the nearest tree is 44 meters to the west/southwest. The nearest road (Hancock AVE) is 45 meters east, and the nearest structure is 32 meters northeast (with a height of approximately 5.5 meters). This reconfiguration complies with all siting criteria and monitor operation standards defined in 40 CFR Part 58, Appendices A, C, D, and E.

Site and monitors meet all design criteria for the monitoring network. See Appendix A for a summary of MDEQ's Gulfport siting criteria information.

- **Sampling train:** The probe tubing is FEP, and the probe fittings are PFA. The stainless-steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel. See Appendix A for a summary of MDEQ's OZONE Residence Time.
2. **Waveland** (Hancock Co. 28.045.0003) – MDEQ operates an ozone monitor, and a continuous FEM PM2.5 monitor at this site. MDEQ has no plans to change the current monitoring efforts at this site.
 - **Site Approval Status:** MDEQ removed the current (old monitoring building), and then installed a new replacement monitoring shelter. MDEQ received verbal (01/03/2024) and email approval (01/04/2024), from EPA to reconfigure this site. The existing (old building) was shut down on 02/19/2024, and the newly reconfigured Waveland site began collecting data on 02/23/2024. Below is a summary of this reconfiguration:
 1. Relocated the T640 PM and ozone instruments from the current monitoring building to the new one.
 2. Placed each probe on top of the new building, maintaining the same configuration as the removed building.
 3. Set the ozone probe height on the new building at approximately 5.0 meters from the ground.
 4. Established the T640 sample head height on the new building at approximately 4.2 meters from the ground.
 5. The reconfiguration/new building GPS coordinates: Latitude 30.184 degrees - Longitude 89.2345 degrees. This is the same as the old monitoring building.
 6. This reconfiguration complies with all siting criteria and monitor operation standards defined in 40 CFR Part 58, Appendices A, C, D, and E. See Appendix A for a summary of MDEQ's Waveland siting criteria information. See Appendix A for a summary of MDEQ's Waveland siting criteria information.

Site and monitors meet all design criteria for the monitoring network. See Appendix A for a summary of MDEQ's Waveland siting criteria information.

- **Sampling train:** The probe tubing is FEP, and the probe fittings are PFA. The stainless-steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel. See Appendix A for a summary of MDEQ's OZONE Residence Time.

3. **Pascagoula** (Jackson Co. 28.059.0006)- MDEQ operates an OZONE, SO₂, nitrogen oxide (NO_x) monitor, and a continuous FEM PM_{2.5} monitor at this site. The NO_x monitor is designated as an RA-40 site. The SO₂ monitor is designated as a population weighted exposure index (PWEI) site. MDEQ has no plans to change the current monitoring efforts at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. See Appendix A for a summary of MDEQ's Pascagoula siting criteria information.
 - **Sampling train:** The probe tubing is FEP, and the probe fittings are PFA. The stainless-steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel. See Appendix A for a summary of MDEQ's OZONE, SO₂ and NO_x Residence Time.

4. **Pascagoula Cherokee** (Jackson Co. 28.059.0007) MDEQ is in the process of establishing a Special Purpose Monitoring (SPM) station in the Cherokee Community of Pascagoula, MS. MDEQ has a tentative startup date of July 01, 2024. This SPM air monitoring station will be operated for one year near the Cherokee community, which is situated in close proximity to the Bayou Casotte Industrial Complex. The pollutants of concern identified by EPA and the Agency for Toxic Substances and Disease Registry (ATSDR) for the Cherokee Community include particulate matter smaller than 10 microns in diameter (PM₁₀), PM₁₀ metals, volatile organic compounds (VOC), and total reduced sulfur (TRS) compounds. PM₁₀ and TRS compounds will be monitored continuously, while PM₁₀ metals and VOCs will be sampled on a 1 in 6-day schedule. Additionally, near fence line SPODs that trigger sample canisters are proposed for the project to capture any high concentration VOC plumes that may occur outside of a regularly scheduled sample day near the Bayou Casotte Industrial Complex.

This proposed multi-pollutant air quality monitoring project will obtain quality, long term monitoring data necessary to identify the presence of any air quality problem associated with the pollutants of greatest concern in the Cherokee community. The main concern for the Cherokee community is the potential for cumulative risk associated with the proximity to an industrial complex housing multiple types of industrial sources.

The benefit of identifying whether an air quality problem exists in this Environmental Justice (EJ) community will be to (1) put citizens' minds at ease should no air quality problem be found or (2) give MDEQ and other agencies the necessary data to identify ways to mitigate any air quality problem and/or reduce any unacceptable risk to the community.

- **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. See Appendix A for a summary of MDEQ's Pascagoula Cherokee siting criteria information.
- **Sampling train:** The probe tubing is FEP, and the probe fittings are PFA. The stainless-steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel. See Appendix A for a summary of MDEQ's TRS Residence Time.

Non- MSA Sites:

1. **Meridian** (Lauderdale Co. 28.075.0003) – An ozone monitor is operated at this site. MDEQ has no plans to change the current monitoring efforts at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. See Appendix A for a summary of MDEQ’s Meridian siting criteria information.
 - **Sampling train:** The probe tubing is FEP, and the probe fittings are PFA. The stainless-steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel. See Appendix A for a summary of MDEQ’s OZONE Residence Time.
2. **Tupelo** (Lee Co. 28.081.0005) – An ozone monitor is operated at this site. MDEQ has no plans to change the current monitoring efforts at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. See Appendix A for a summary of MDEQ’s siting criteria information.
 - **Sampling train:** The probe tubing is FEP, and the probe fittings are PFA. The stainless-steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel. See Appendix A for a summary of MDEQ’s OZONE Residence Time.
3. **Cleveland** (Bolivar Co. 28.011.0002) – MDEQ operates an ozone monitor, and a continuous FEM PM2.5 monitor (Background) at this site. MDEQ has no plans to change the current monitoring efforts at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. See Appendix A for a summary of MDEQ’s Cleveland siting criteria information.
 - **Sampling train:** The probe tubing is FEP, and the probe fittings are PFA. The stainless-steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel. See Appendix A for a summary of MDEQ’s OZONE Residence Time.

5.0 NCore Site Tables

AQS ID	MSA	Site Name	County	City	Latitude	Longitude	Street Address	Elevation (meters)	Site start date	Location Setting
28-049-0020	Jackson	Jackson NCore	Hinds	Jackson	32.19.45	90.10.58	232 E Woodrow Wilson	93	7/01/2013	Urban and city center
Parameter	Monitoring Objective	Measurement Scale	Designation	Type	Method			Schedule	Comment	
CO	Pop. Exp.	Neighborhood	NCore	Continuous Monitor	Non-Dispersive IR			Jan-Dec		
NO _y	Pop. Exp.	Neighborhood <i>(Urban)</i>	NCore	Continuous Monitor	Chemiluminescence			Jan-Dec		
O ₃	Pop. Exp.	Neighborhood <i>(Urban)</i>	NCore	Continuous Monitor	UV Photometry			Jan-Dec		
SO ₂	Pop. Exp.	Neighborhood	NCore	Continuous Monitor	UV fluorescence			Jan-Dec		
FRM PM _{2.5}	Pop. Exp.	Neighborhood	NCore	Manual Reference Monitor (3 Day)	Gravimetric Analysis			Jan-Dec		
FEM PM _{2.5}	Pop. Exp.	Neighborhood	NCore	Continuous Monitor	Broadband Spectroscopy			Jan-Dec	T640x	
PM _{2.5} Speciation	Pop. Exp.	Neighborhood	NCore	Manual Monitor (3 Day)	Multiple Methods			Jan-Dec		
PM coarse	Pop. Exp.	Neighborhood	NCore	Continuous Monitor	Difference by Broadband Spectroscopy			Jan-Dec	T640x	
Meteorological	--	--	NCore	--	Wind speed, direction, ambient temperature, humidity			Jan-Dec		
Radiation	Pop. Exp.	Urban	Rad Net	Continuous / Manual Monitor				Jan-Dec	Non NCore	

6.0 Network Tables

NETWORK DESIGN TABLES MISSISSIPPI

PM10

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Collocated	Type	Method	Schedule	Comment
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Urban	1	No	Continuous	639	Jan-Dec	T640x
Pascagoula Cherokee	Jackson	Pascagoula	28-059-0007	Pop. Exp.	Neighborhood	0	No	Continuous	639	One Year from Startup	T640x

PM2.5

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Collocated	Type	Method	Schedule
Hernando	DeSoto	Memphis	28-033-0002	Transport	Urban	1	No	Continuous	636 T640	Jan-Dec
Hattiesburg	Forrest	Hattiesburg	28-035-0004	Pop. Exp.	Neighborhood	1	Yes	Manual (1/6 day) collocated Continuous	145 SEQ 636 T640	Jan-Dec Jan-Dec
Waveland	Hancock	Gulf/Biloxi	28-045-0003	Pop. Exp.	Neighborhood	0	No	Continuous	636 T640	Jan-Dec

Gulfport	Harrison	Gulf/Biloxi	28-047-0008	Pop. Exp.	Neighborhood	1	No	Continuous	636 T640	Jan-Dec
Pascagoula	Jackson	Pascagoula	28-059-0006	Pop. Exp.	Neighborhood	0	No	Continuous	636 T640	Jan-Dec
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Neighborhood	1	No	PM10-2.5 (primary) Manual (3 Day) Continuous	638 T640x 640 T640x 145 SEQ	Jan-Dec Jan-Dec Jan-Dec
Jackson	Hinds	Jackson	28-049-0021	Pop. Exp.	Neighborhood	1	No	Continuous	636 T640	Jan-Dec
Cleveland	Bolivar	N/A	28-011-0002	Background	Neighborhood	1	No	Continuous	636 T640	Jan-Dec

Comments: All manual monitors are FRM and classified as SLAMS. The continuous FEM monitors will be primary.

SO₂ and TRS

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Type	Method	Schedule
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Neighborhood	1	Continuous	600	Jan-Dec
Pascagoula	Jackson	Pascagoula	28-059-0006	Pop. Exp.	Neighborhood	0	Continuous	060	Jan-Dec
Pascagoula Cherokee	Jackson	Pascagoula	28-059-0007	Pop. Exp.	Neighborhood	0	Continuous	N/A	One year from startup

Comments: All monitors are classified as SLAMS, Except the Pascagoula Cherokee Site

NO_x/NO_y

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Type	Method	Schedule
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Neighborhood /Urban	1	Continuous	699	Jan-Dec
Pascagoula	Jackson	Pascagoula	28-059-0006	Pop. Exp.	Neighborhood	0	Continuous	099	Jan-Dec

Comments: All monitors are classified as SLAMS

CO

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Type	Method	Schedule
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Neighborhood	1	Continuous	055	Jan-Dec

OZONE

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Type	Method	Schedule
Cleveland	Bolivar	N/A	28-011-0002	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct
Gulfport	Harrison	Gulf/Biloxi/Pas	28-047-0008	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct

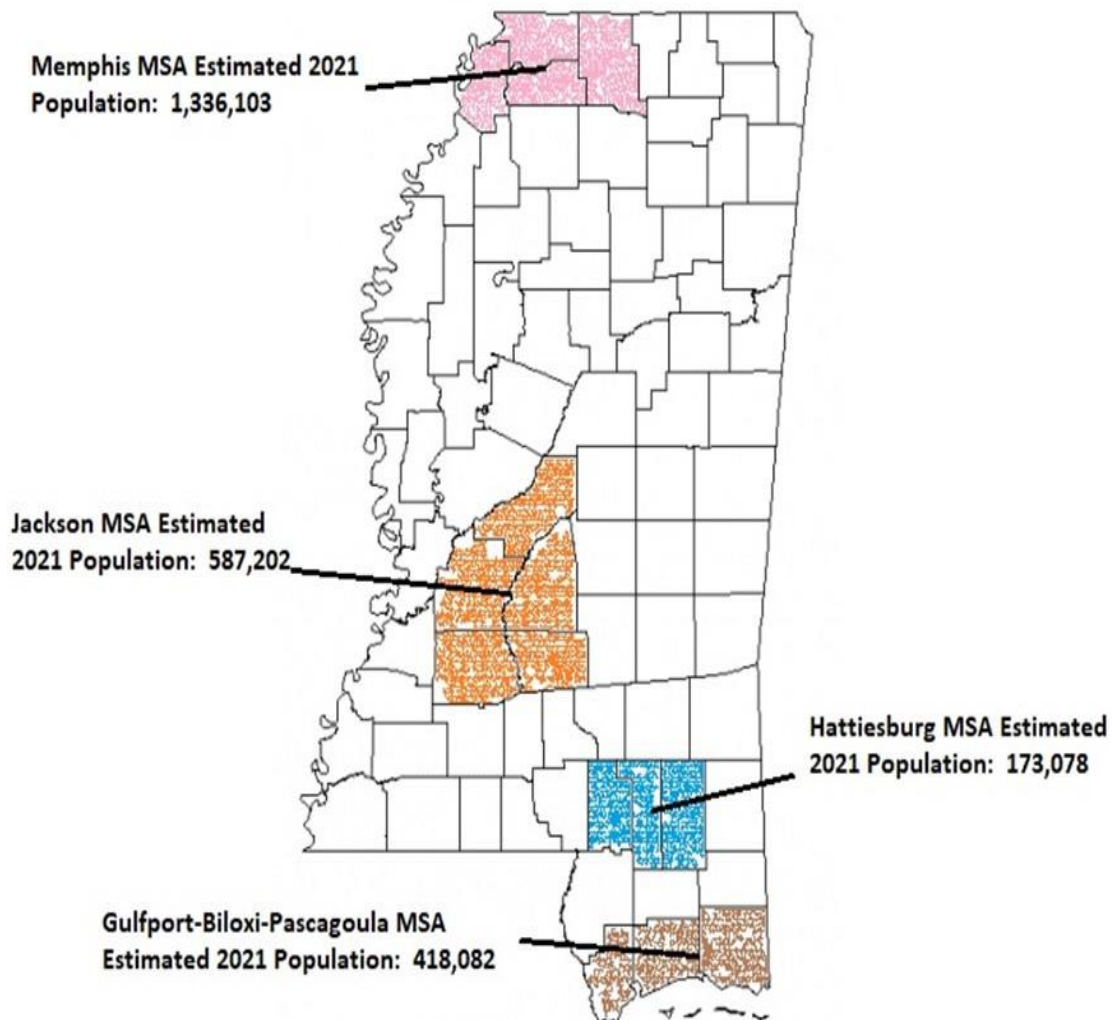
Waveland	Hancock	Gulf/Biloxi/Pas	28-045-0003	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct
Hernando	DeSoto	Memphis	28-033-0002	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Jackson	Hinds	Jackson	28-049-0021	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Urban	1	Continuous	UV Absorp	Jan - Dec
Meridian	Lauderdale	N/A	28-075-0003	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct
Pascagoula	Jackson	Gulf/Biloxi/Pas	28-059-0006	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Tupelo	Lee	N/A	28-081-0005	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct

Comments: All monitors are classified as SLAMS

7.0 Site Location Coordinates

Site ID	Latitude	Longitude	Site Name	County	Address
28-011-0002	33 45 3	-90 44 3	Cleveland	Bolivar	HWY 8 Cleveland, MS (Delta State)
28-033-0002	34 49 14	-89 59 16	Hernando	Desoto	5 East Sout Street
28-035-0004	31 19 26	-89 17 32	Hattiesburg	Forrest	101 Ferguson Street
28-045-0003	30 18 4	-89 23 45	Waveland	Hancock	400 Baltic Street
28-047-0008	30 23 24	-89 2 59	Gulfport YC	Harrison	47 Maples Drive
28-049-0021	32 19 14	-90 10 50	Hinds CC	Hinds	3925 Sunset Drive
28-049-0020	32 19 45	--90 10 58	Jackson NCore	Hinds	232 E. Woodrow Wilson
28-059-0006	30 22 41	-88 32 2	Pascagoula	Jackson	Hospital Rd./LT Eugene J Majure Dr.
28-075-0003	32 21 52	-88 43 53	Meridian	Lauderdale	HWY 19 and 53 rd Ave.
28-081-0005	34 15 54	-88 45 58	Tupelo	Lee	West Jackson at Tupelo Airport
28-059-0007	30 21 8.6	-88 30 32.4	Pascagoula (Cherokee)	Jackson	5305 Ladner Rd

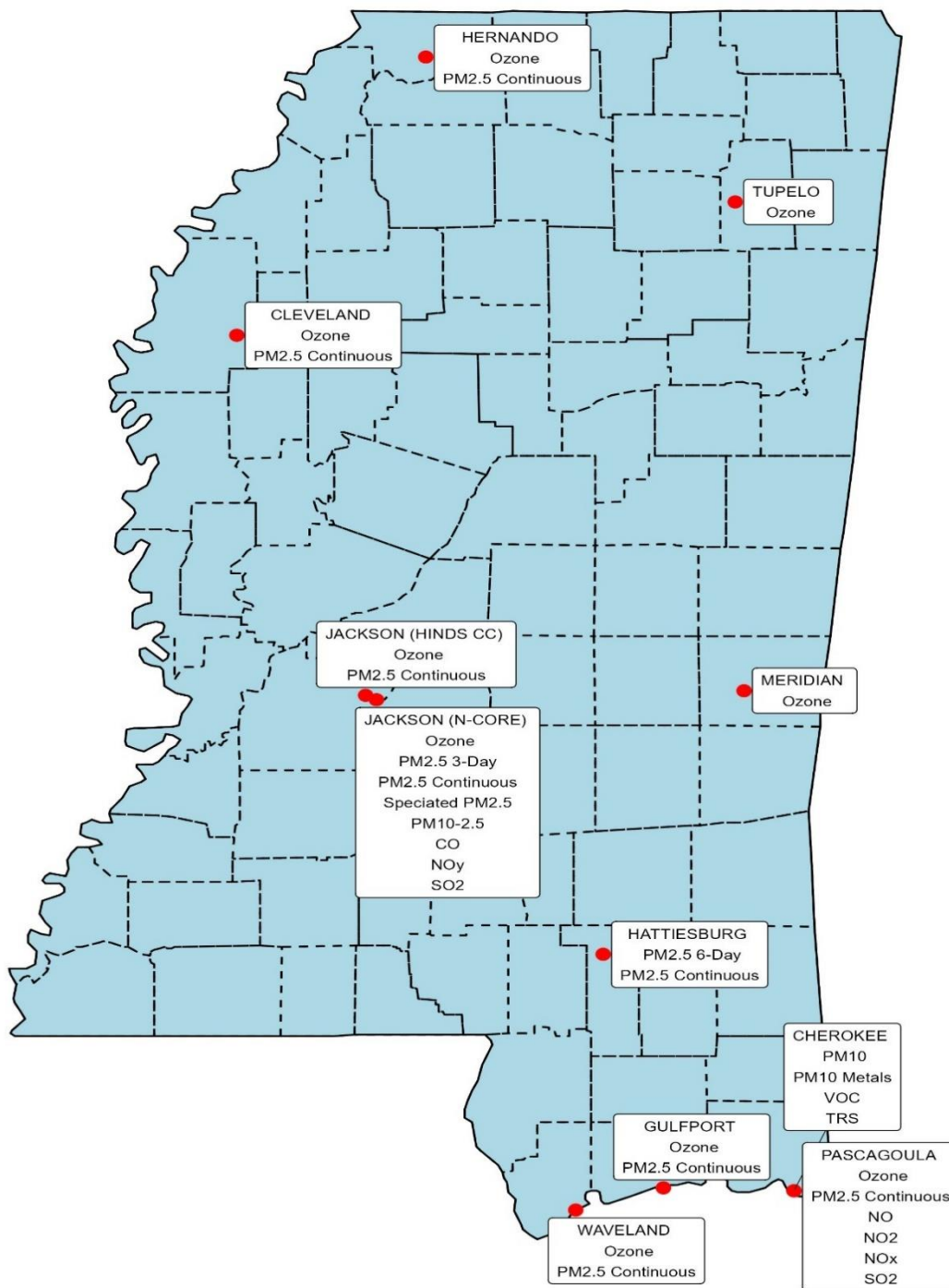
8.0 MSA and Pollutant Maps



MISSISSIPPI MSA AREAS 2025

- MEMPHIS – DeSoto, Tunica, Marshall, Tate
- JACKSON – Hinds, Rankin, Copiah, Simpson, Madison
- HATTIESBURG – Lamar, Forrest, Perry
- GULFPORT-BILOXI-PASAGOULA – Hancock, Harrison, Jackson

2024 MDEQ Air Monitoring Network



9.0 Site Maps and Current Photos

CLEVELAND



Cleveland-North (2024)



Cleveland-South (2024)



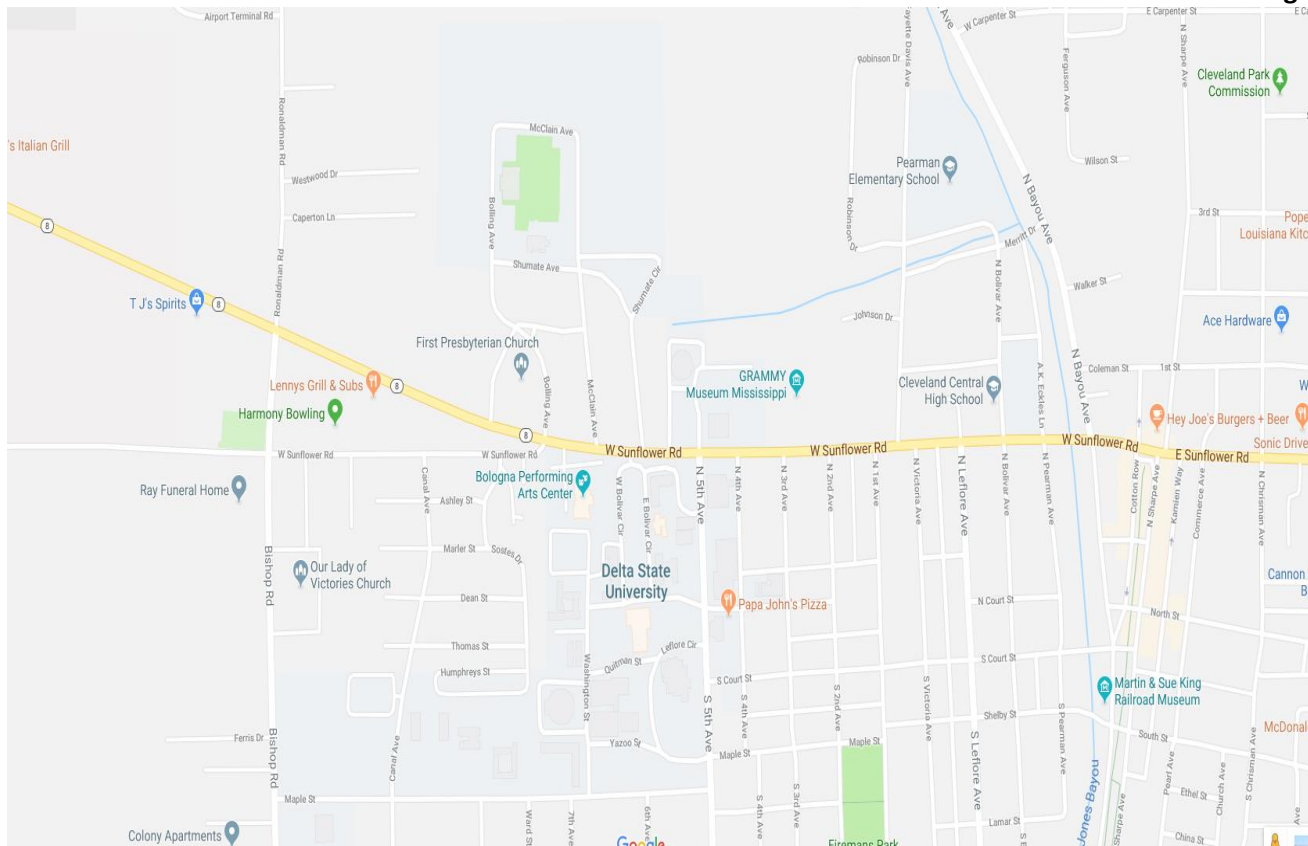
Cleveland-East (2024)



Cleveland-West (2024)



Cleveland 28-011-0002 (2024)



HERNANDO



Hernando- North (2024)



Hernando- South (2024)



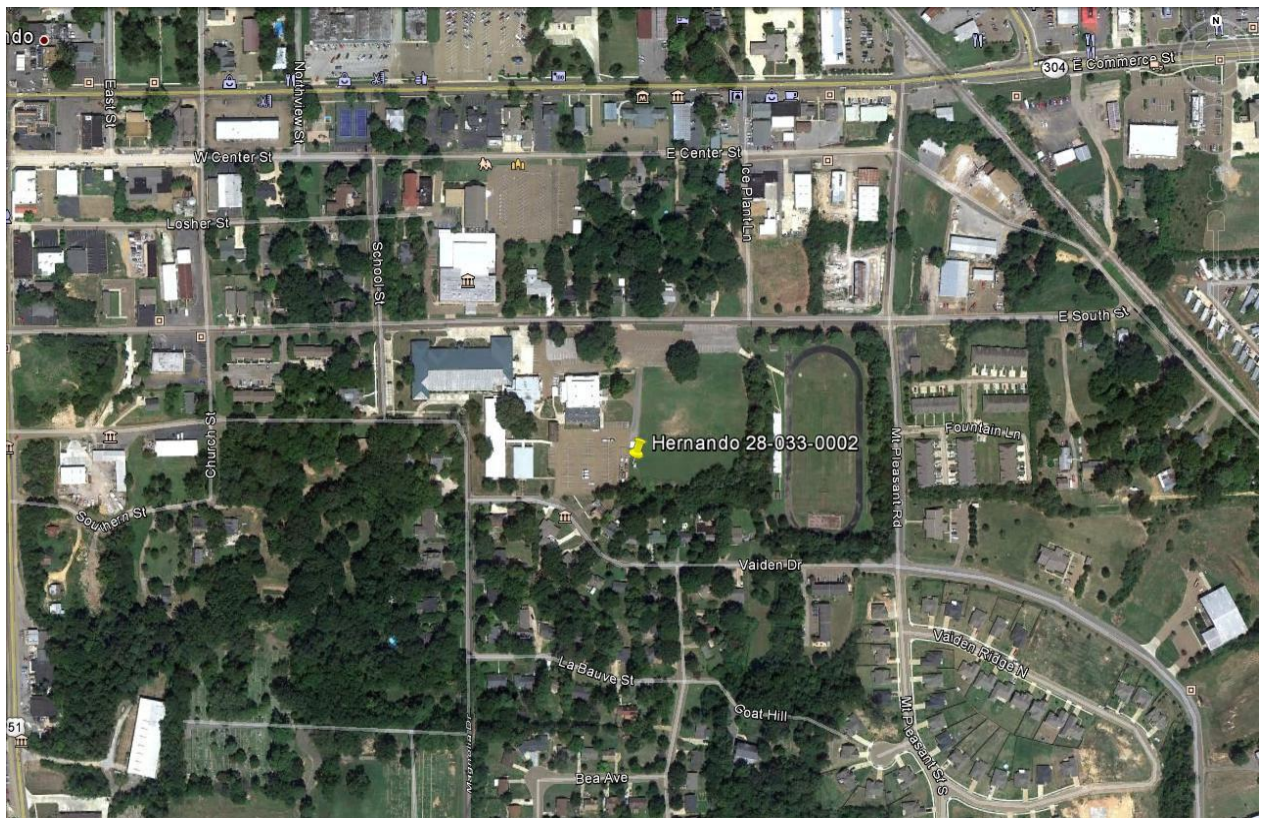
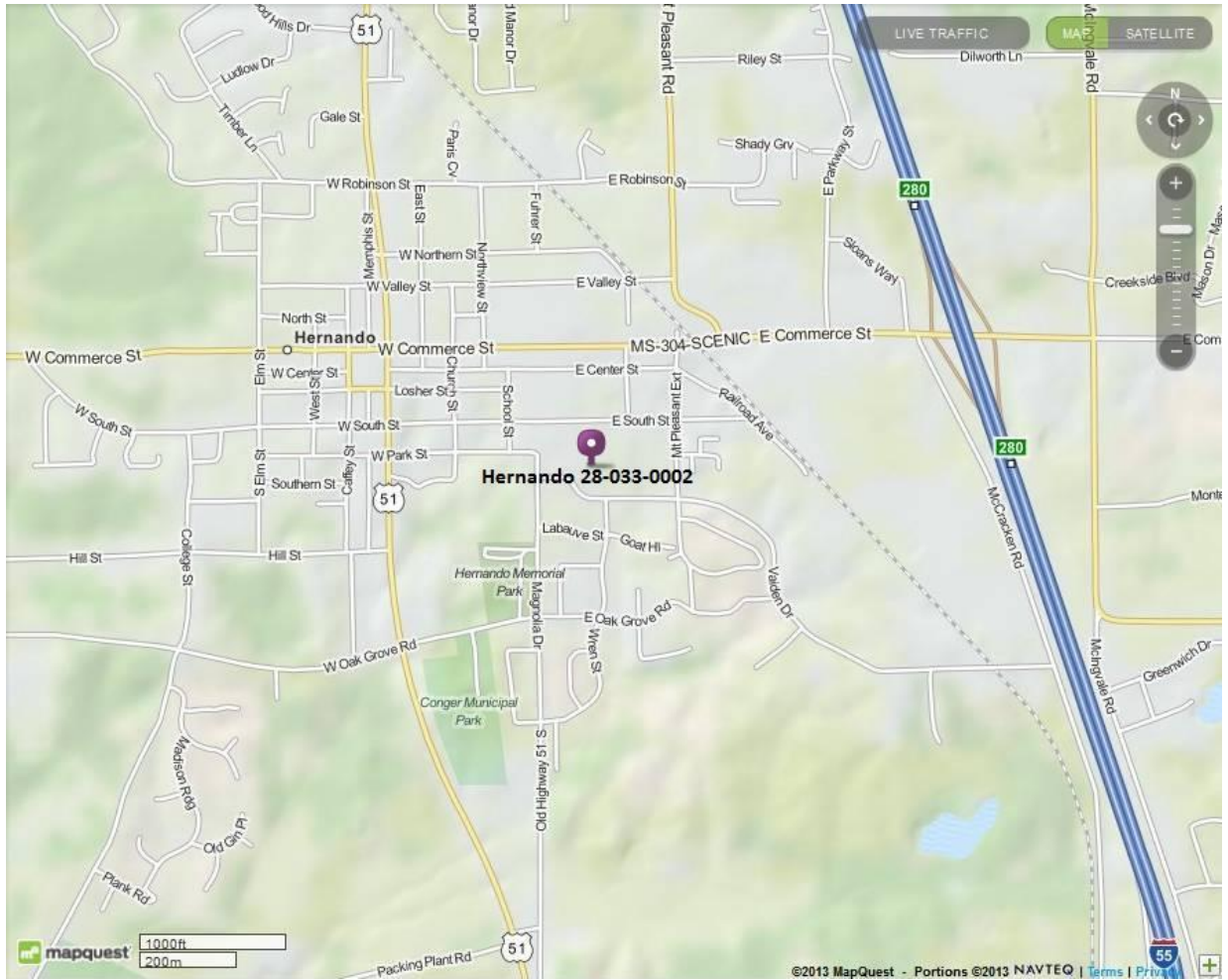
Hernando- East (2024)



Hernando- West (2024)



Hernando- 28-033-0008 (2024)



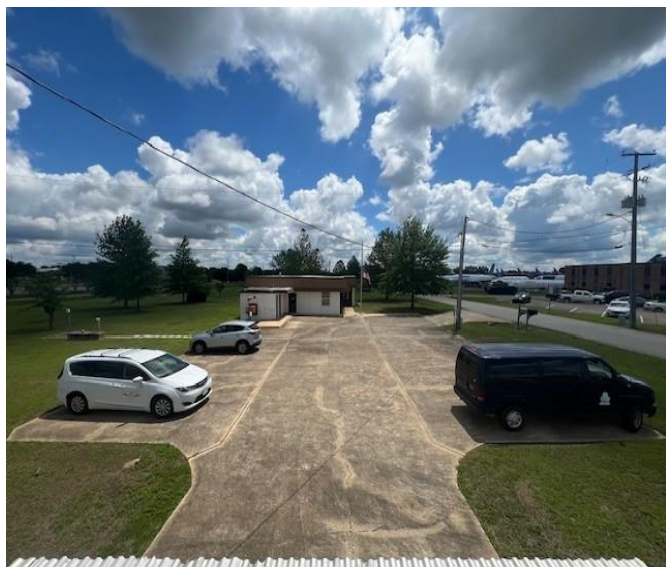
TUPELO



Tupelo- North (2024)



Tupelo-South (2024)



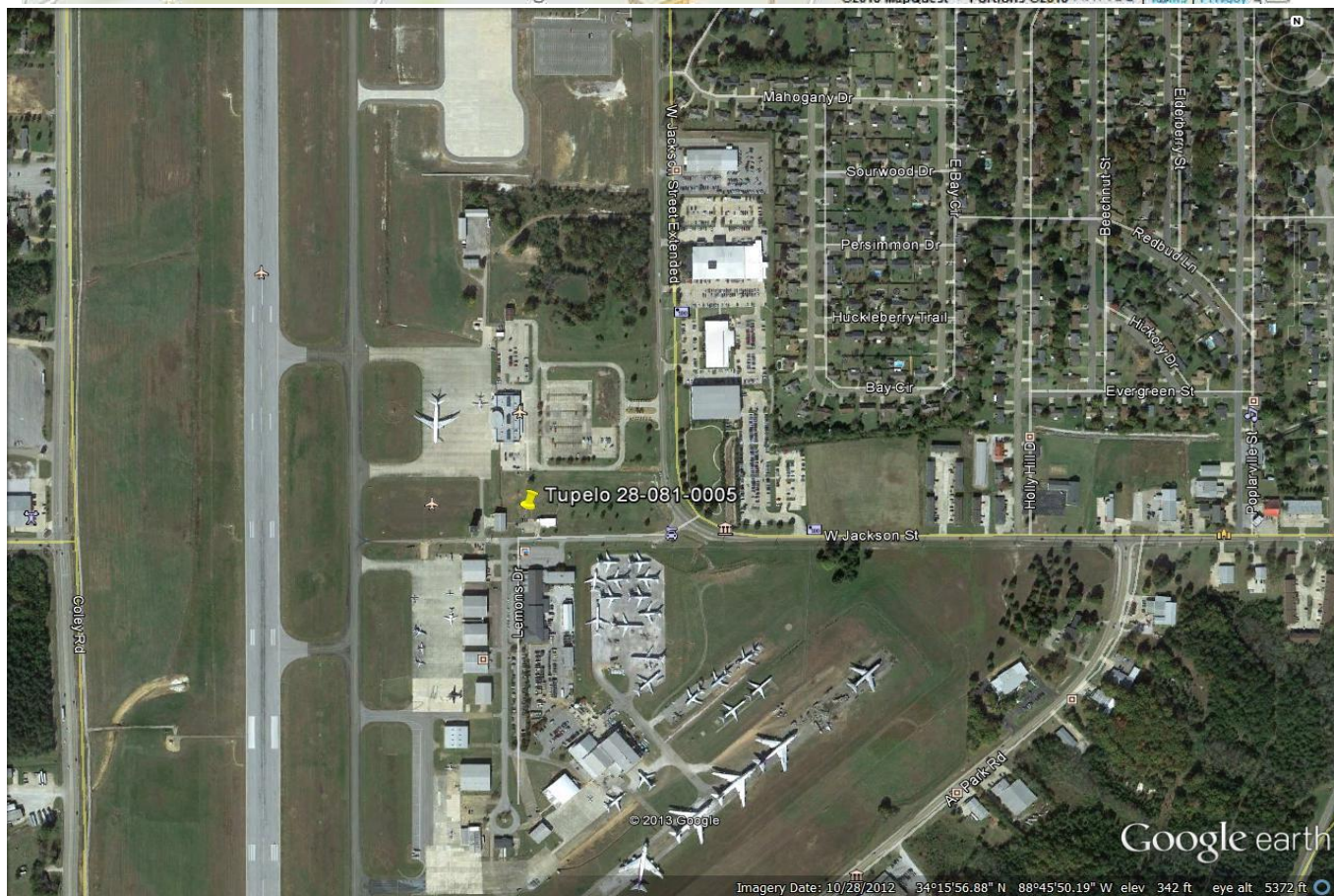
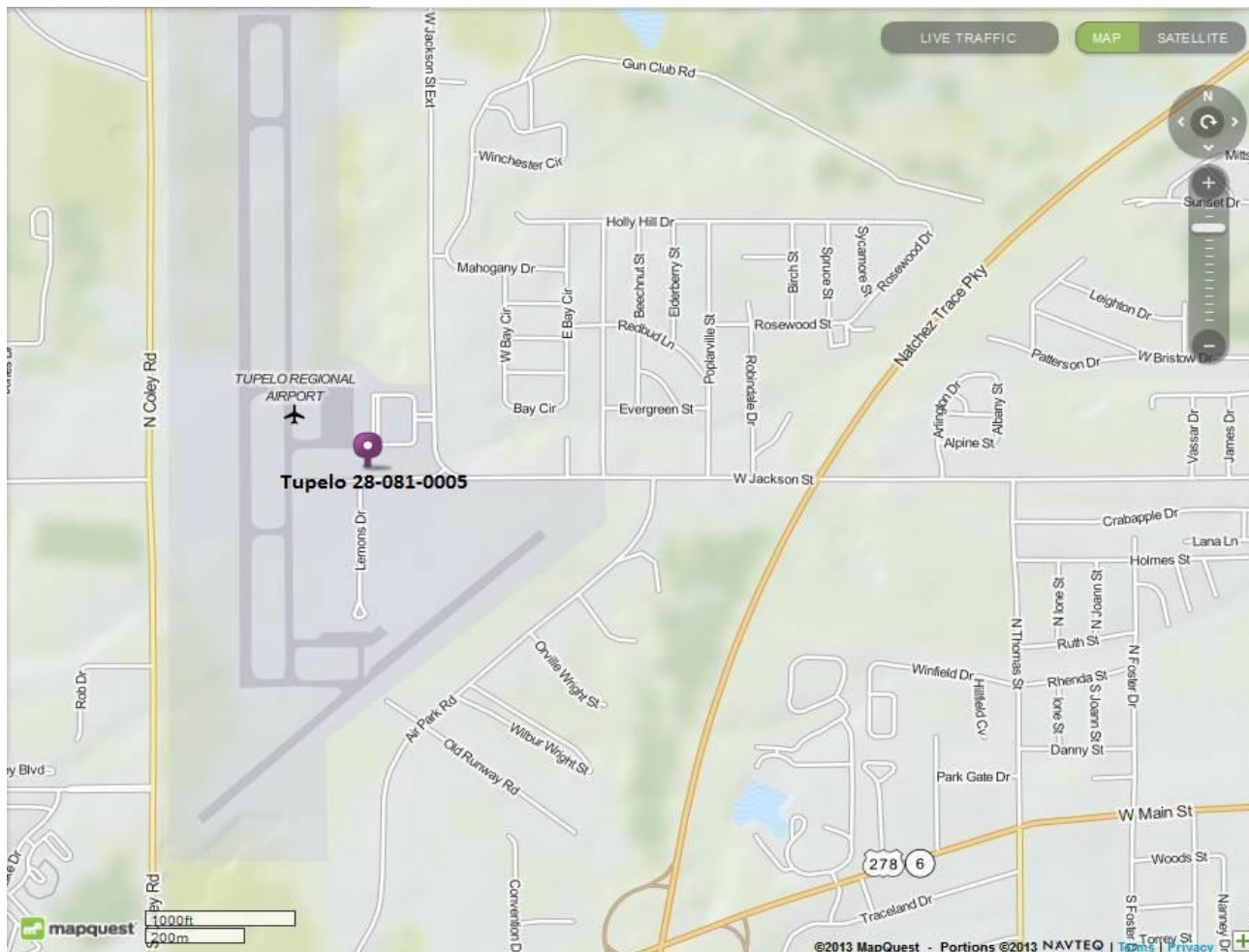
Tupelo-East (2024)



Tupelo- West (2024)



Tupelo 28-081-0005 (2024)



MERIDIAN



Meridian-North (2024)



Meridian-South (2024)



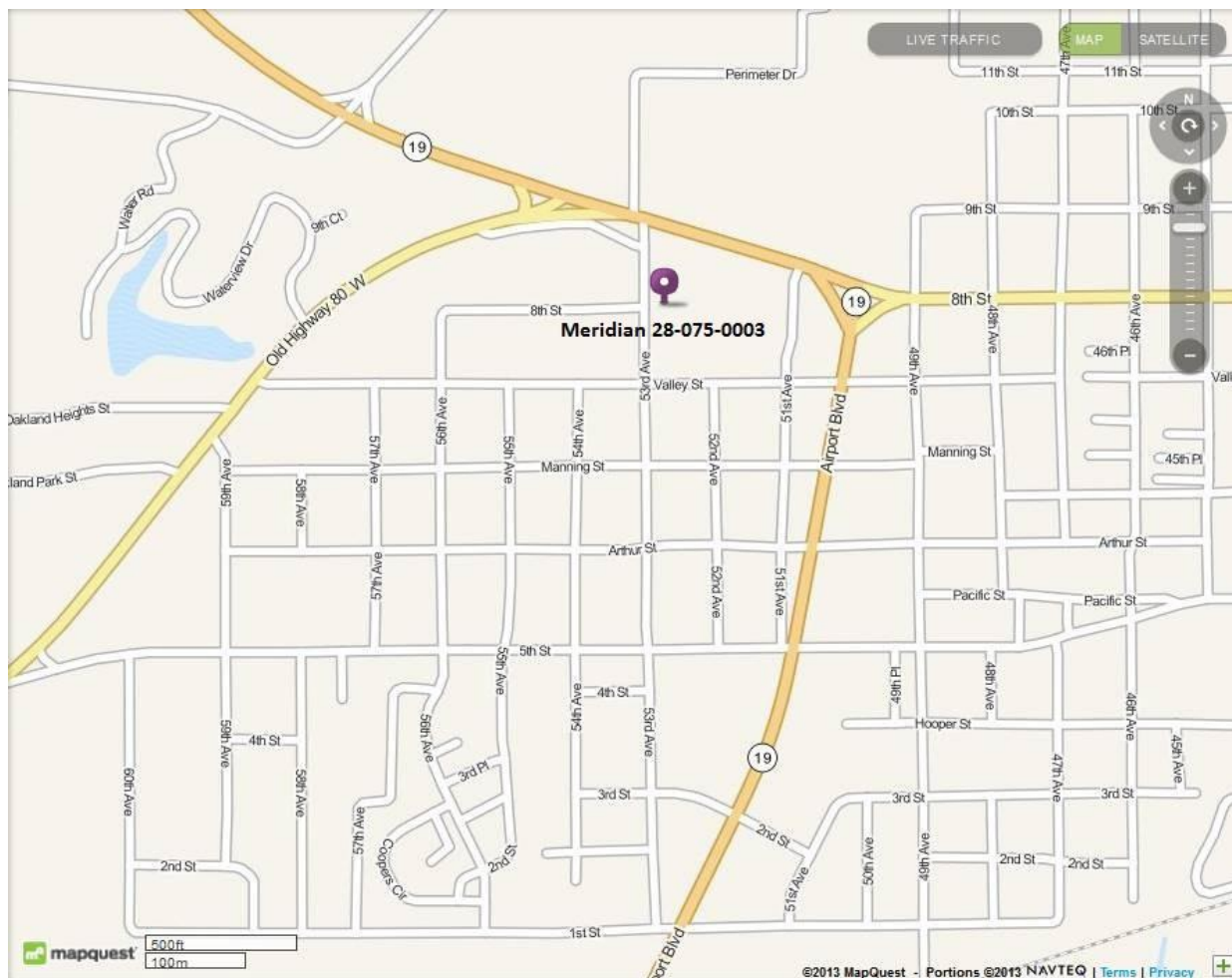
Meridian-East (2024)



Meridian-West (2024)



Meridian-28-075-0003 (2024)



NCORE



NCore-North (2024)



NCore-South (2024)



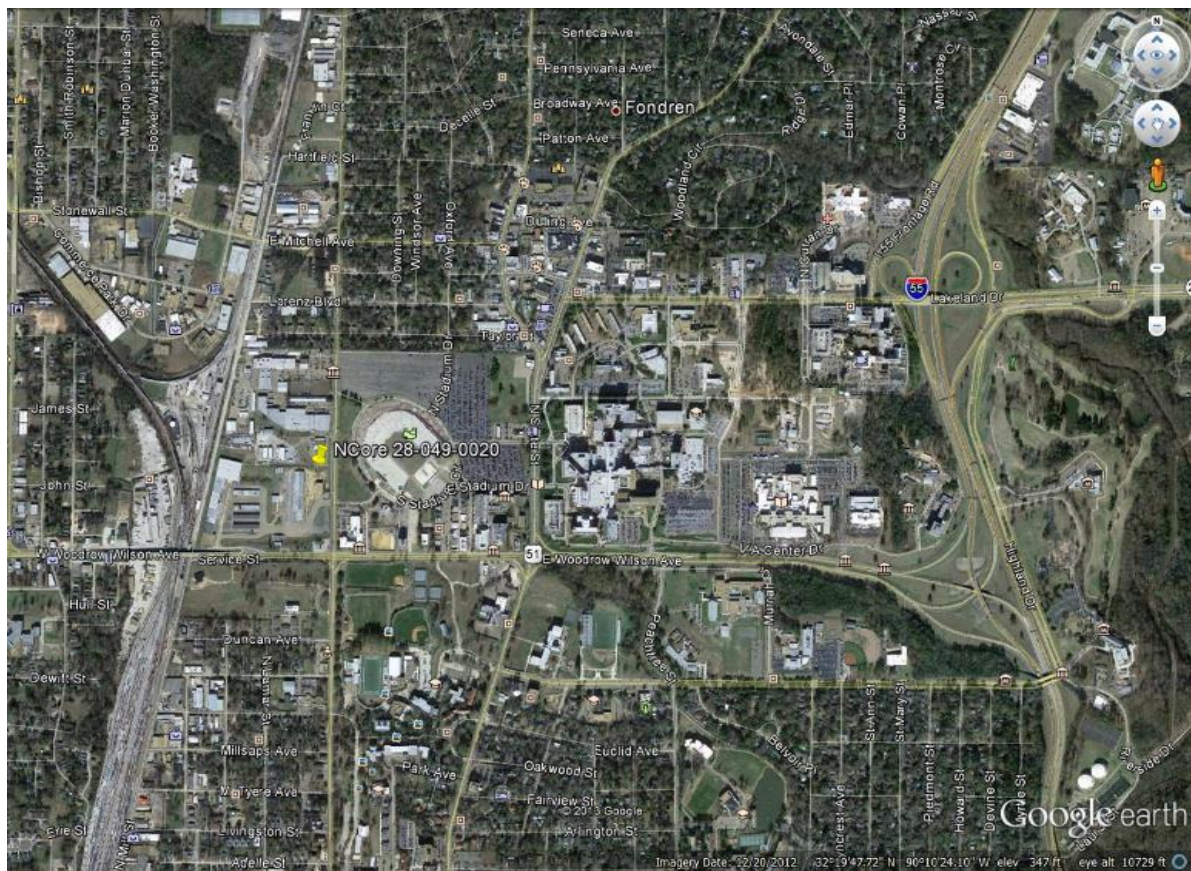
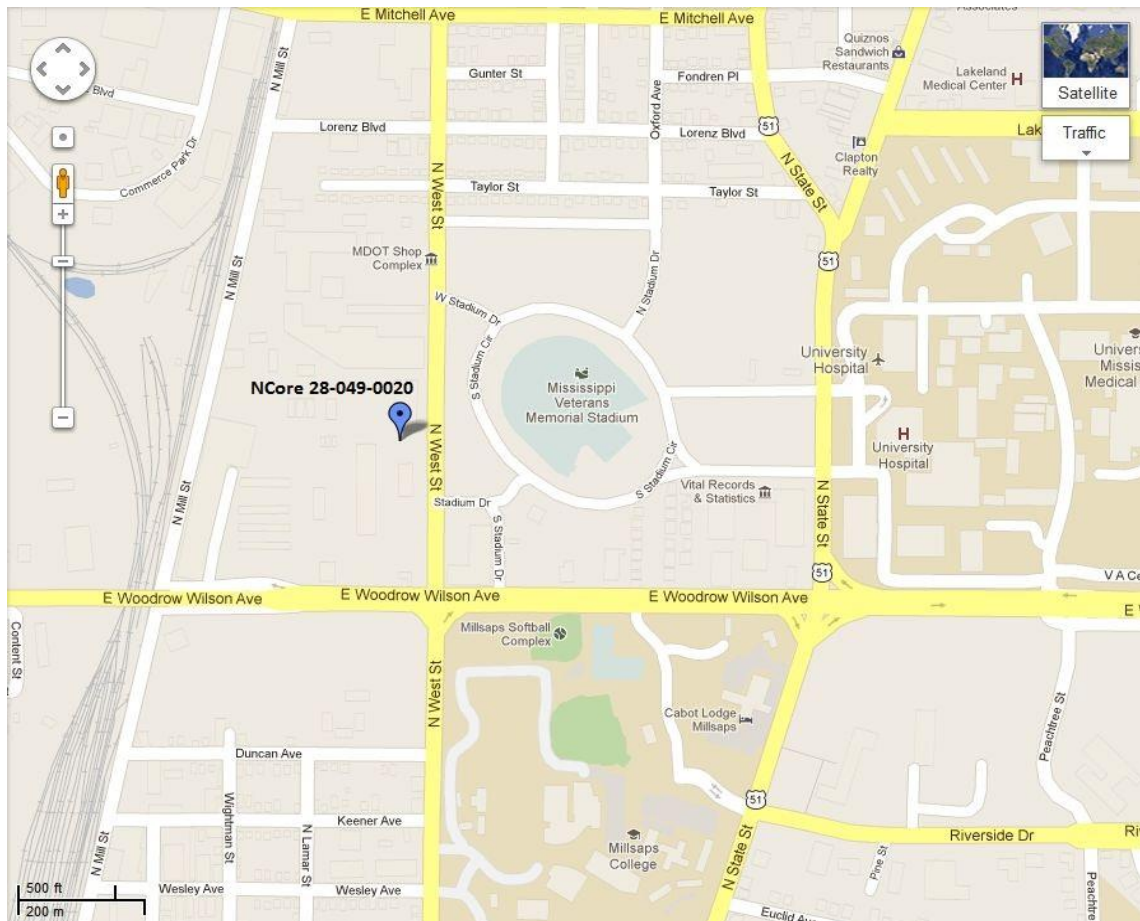
NCore-East (2024)



NCore-West (2024)



NCore-28-049-0020 (2024)



HINDS COMMUNITY COLLEGE (CC)



Hinds-North (2024)



HindsSouth(2024)

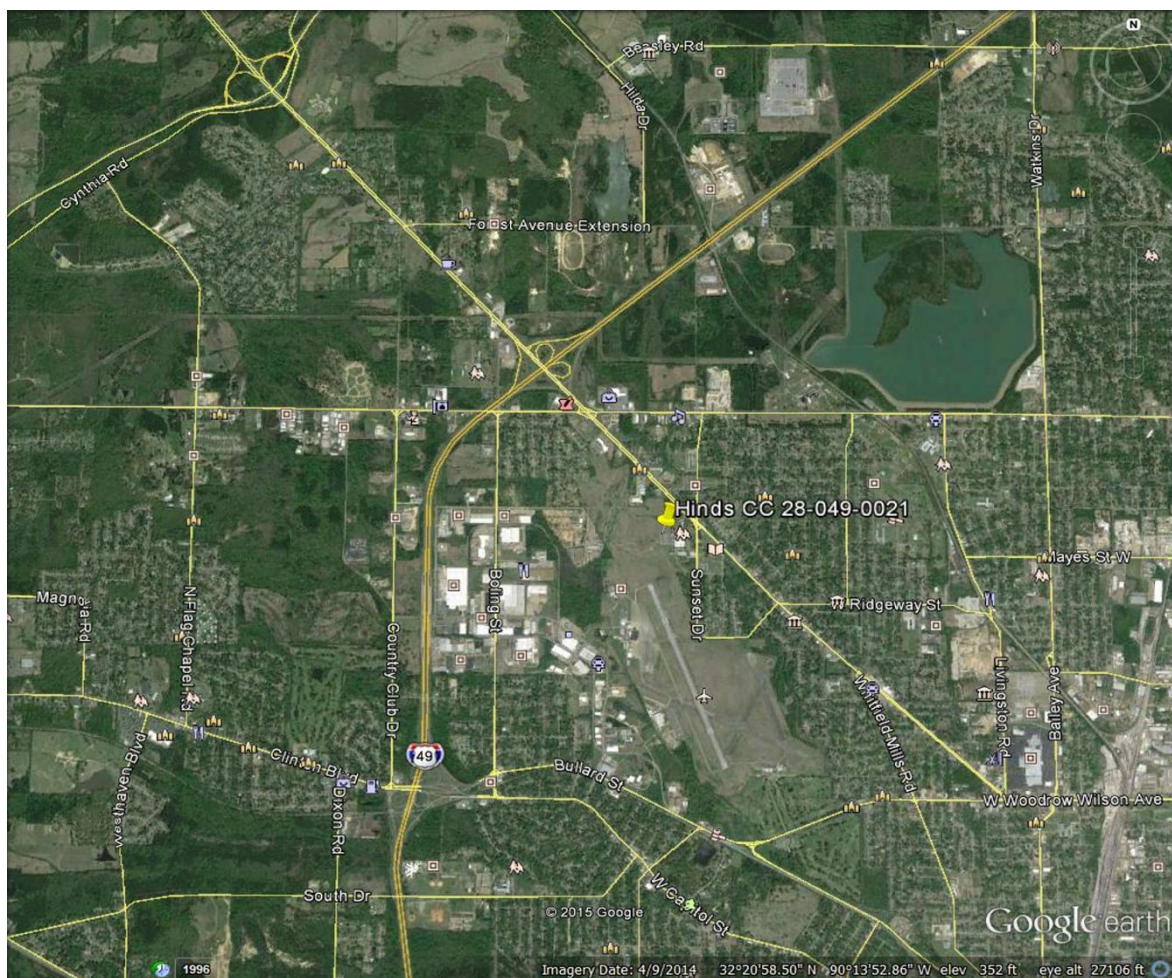
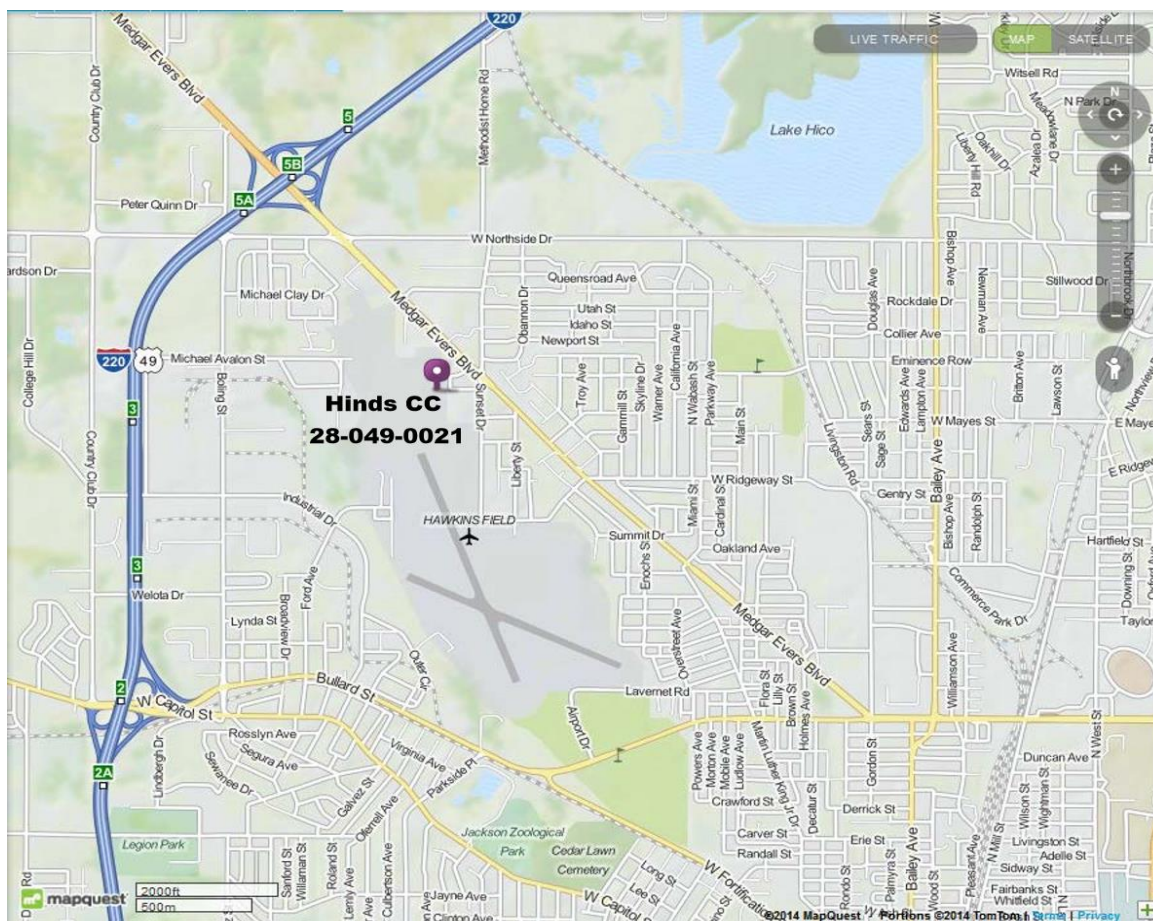


Hinds-East (2024)

Hinds-West (2024)



Hinds-28-049-0021 (2024)



GULFPORT



Gulfport-North (2024)



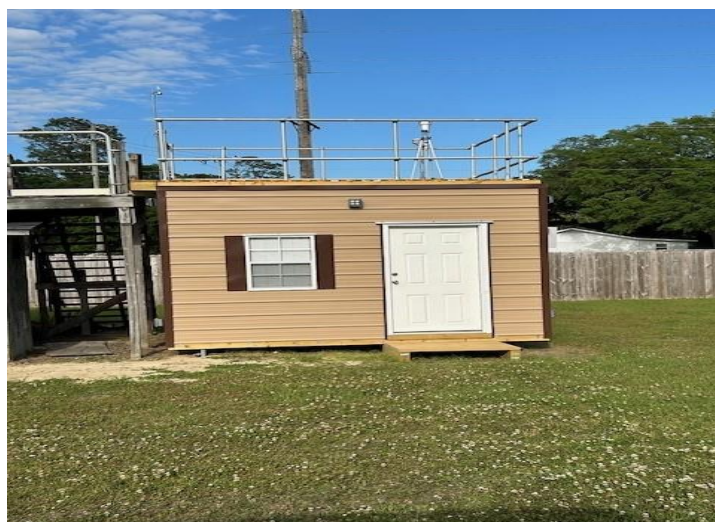
Gulfport-South (2024)



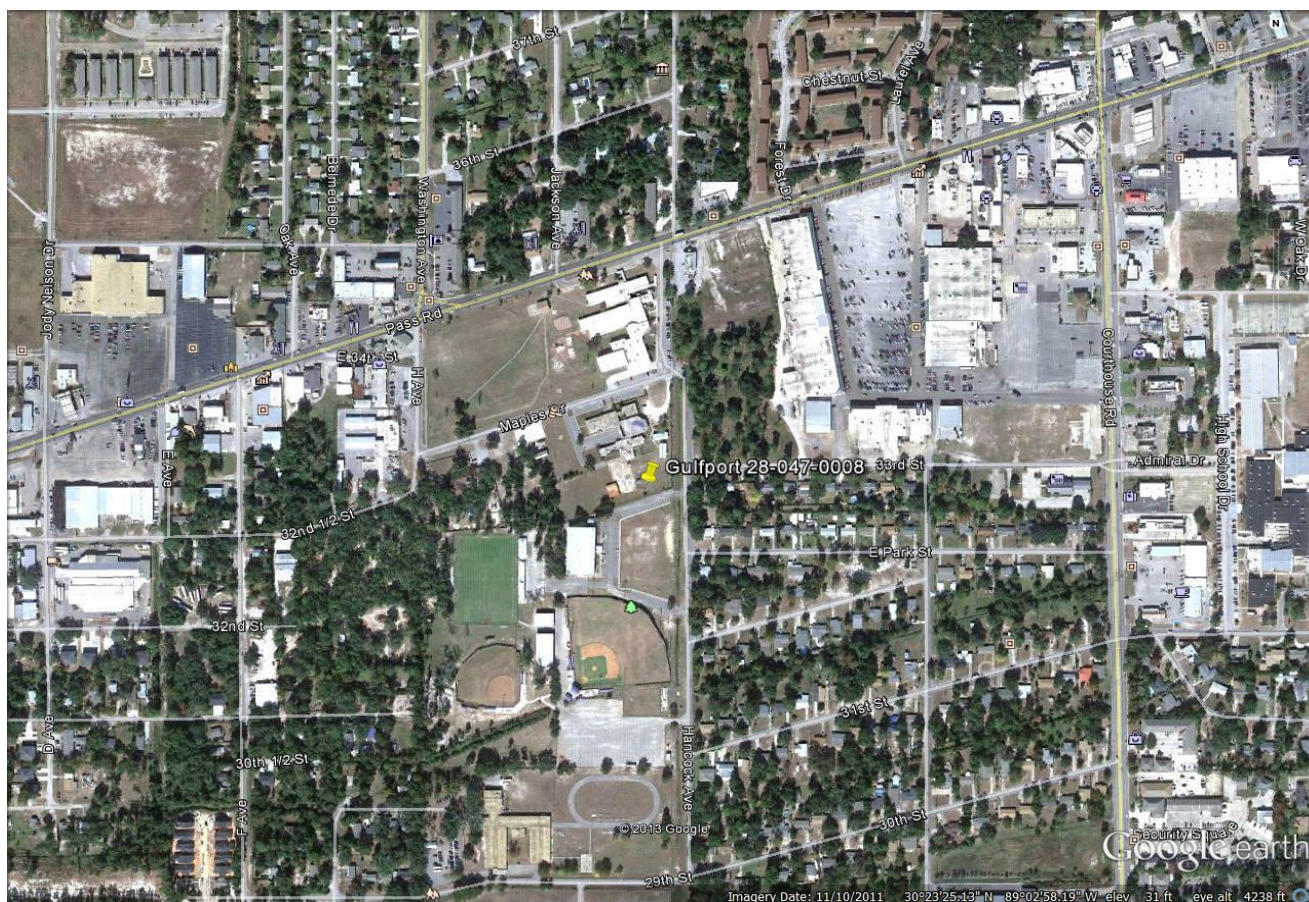
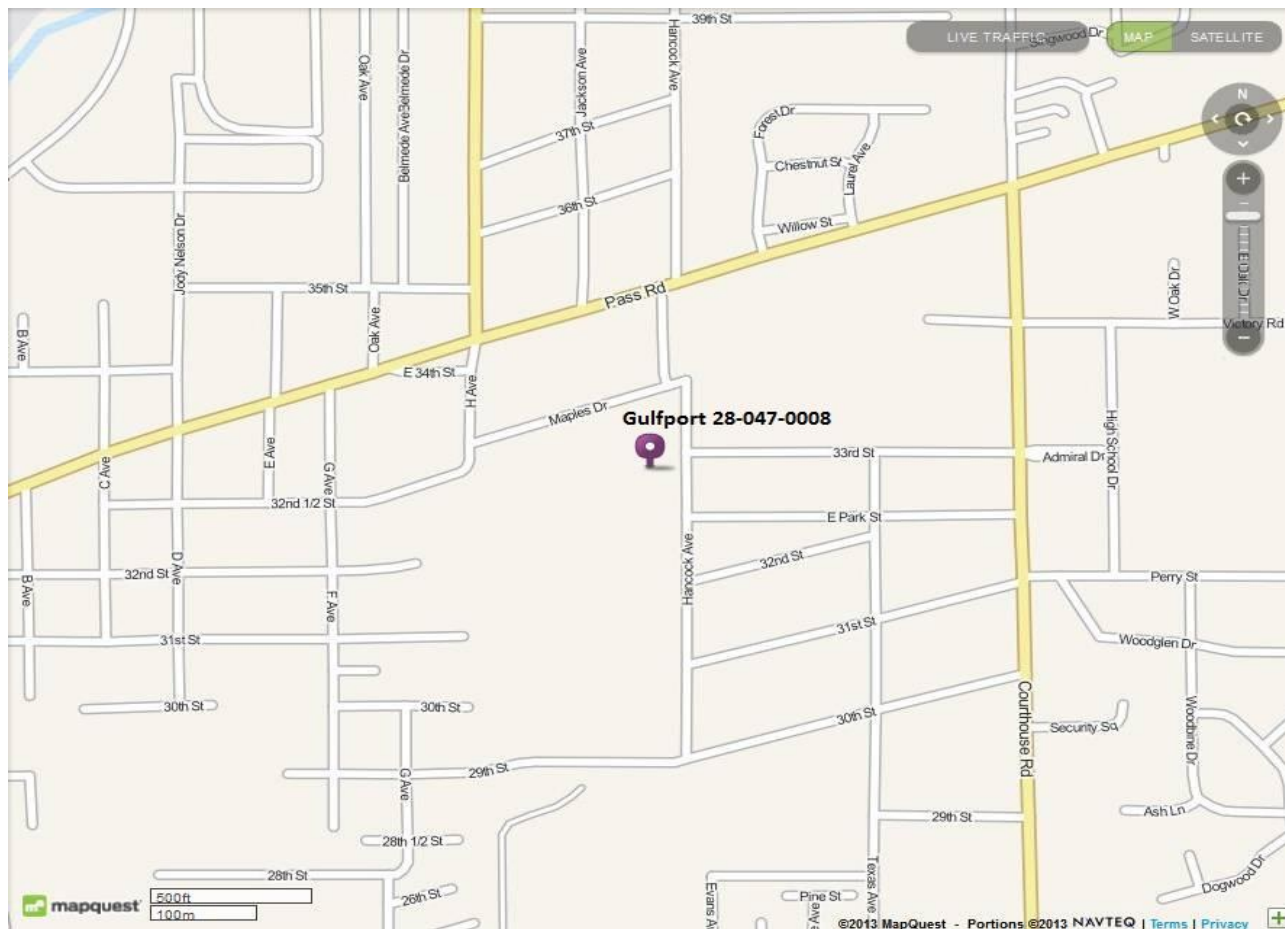
Gulfport-East (2024)



Gulfport-West (2024)



Gulfport-28-047-0008 (2024)



WAVELAND



Waveland-North (2024)



Waveland-South (2024)



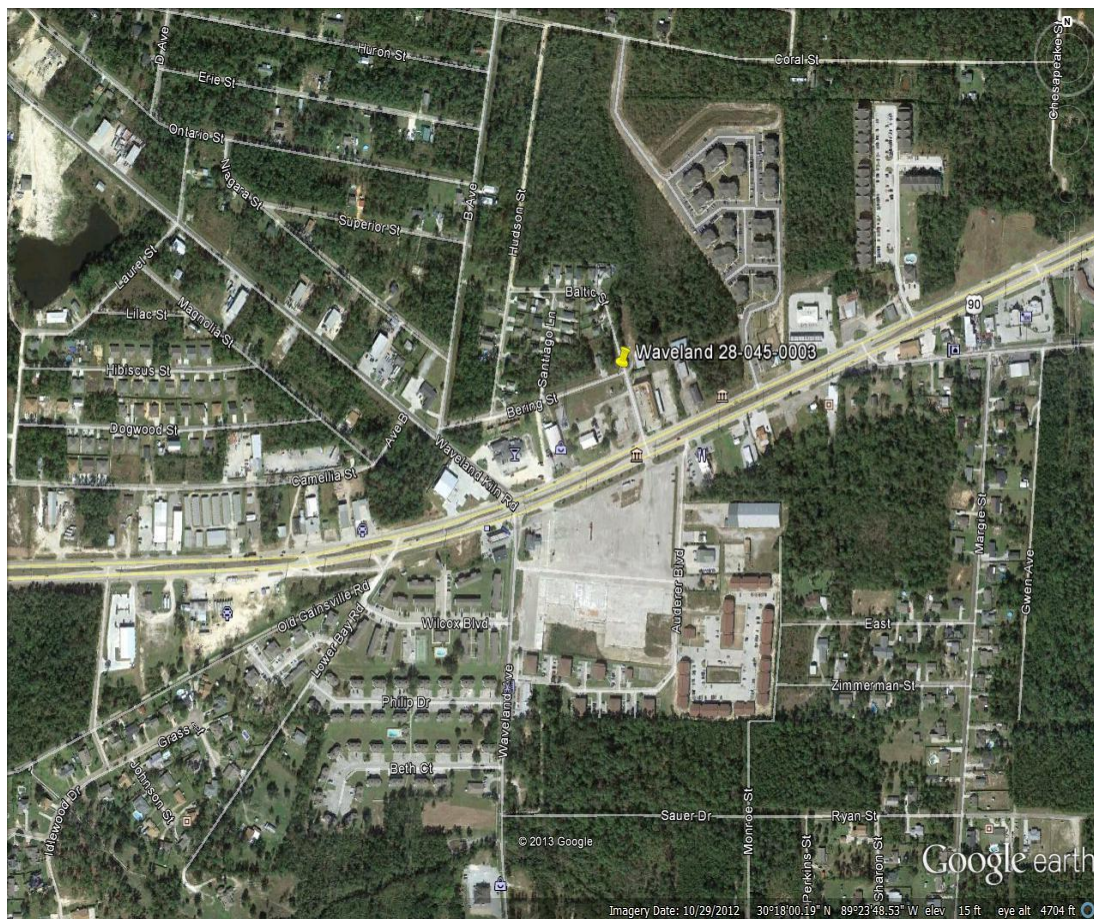
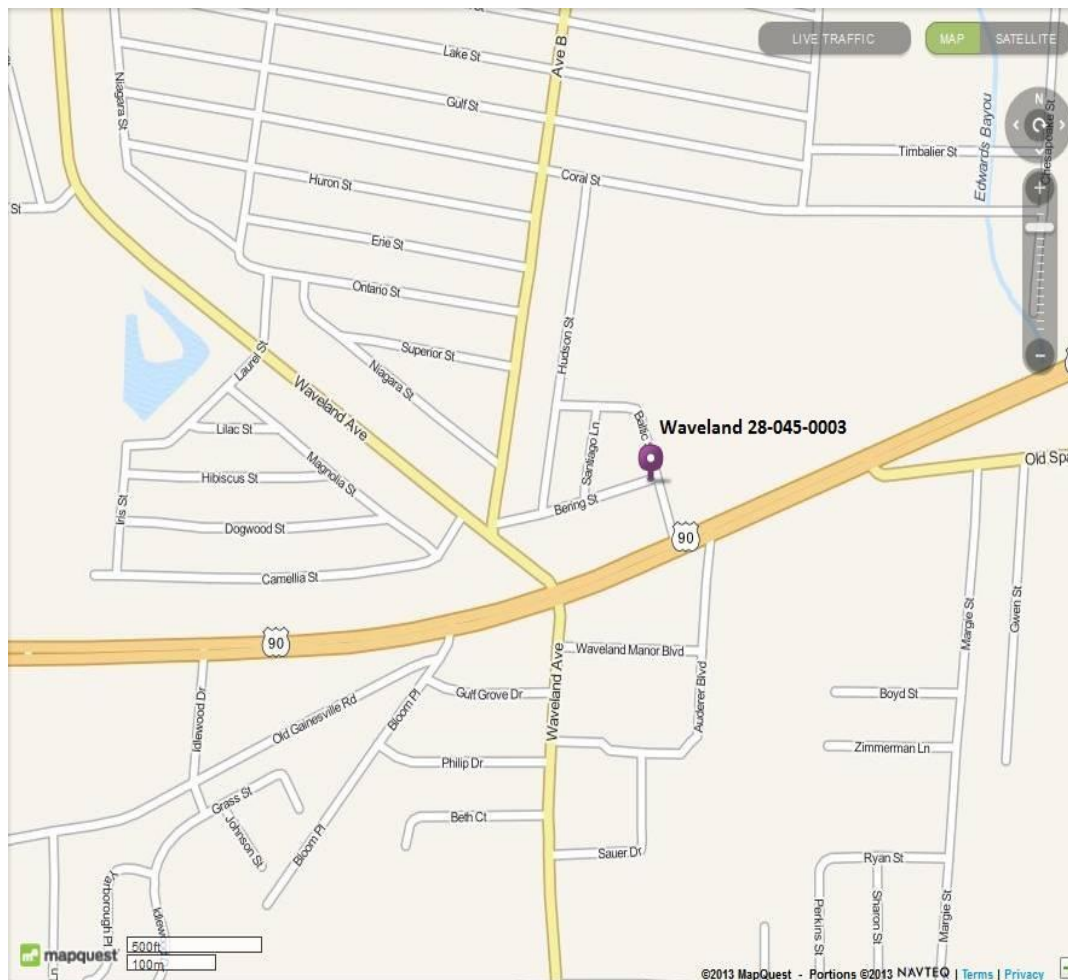
Waveland-East (2024)



Waveland-West (2024)



Waveland-28-045-0003 (2024)



PASCAGOULA



Pascagoula-North (2024)



Pascagoula-South (2024)



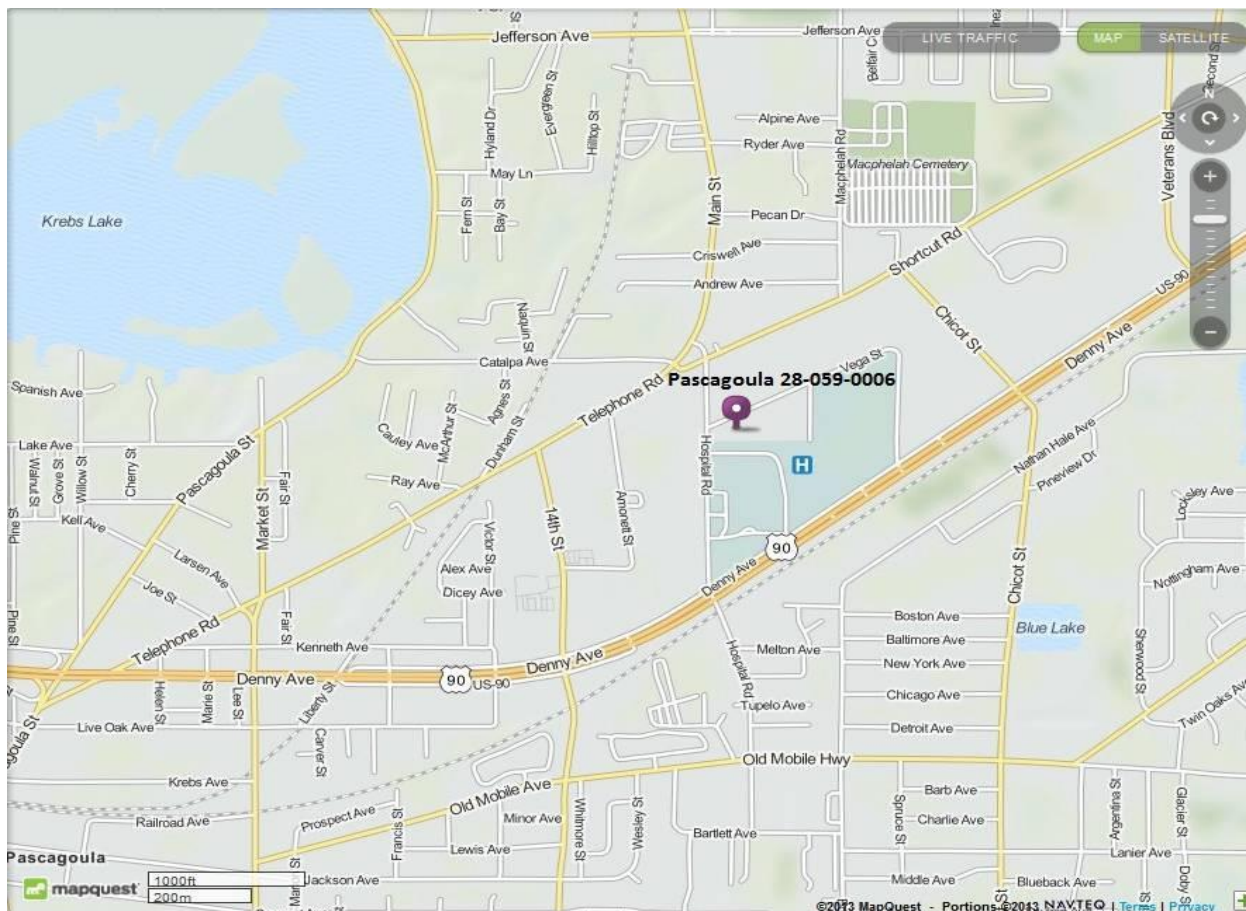
Pascagoula-East (2024)



Pascagoula-West (2024)



Pascagoula-28-059-0006 (2024)



HATTIESBURG



Hattiesburg-North (2024)



Hattiesburg-South (2024)



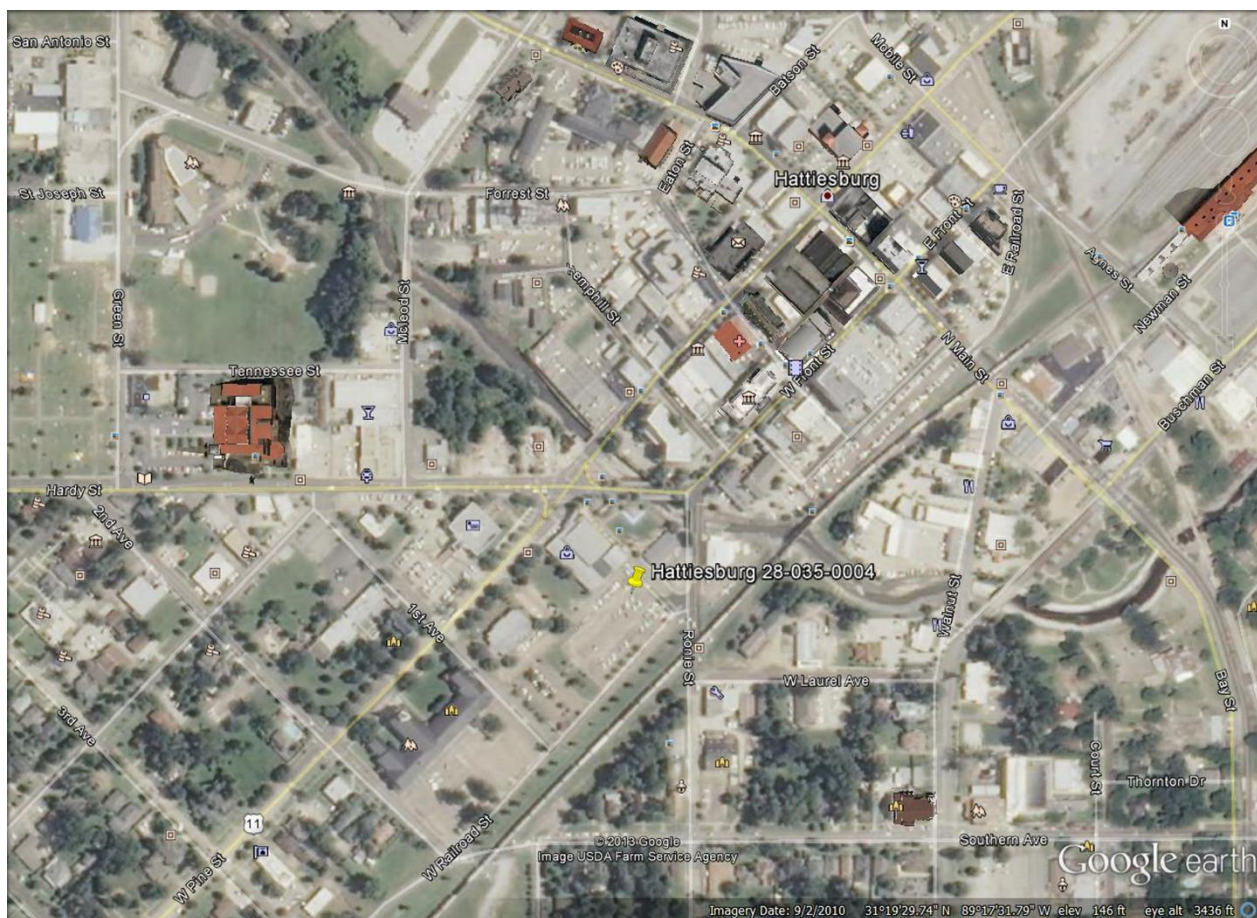
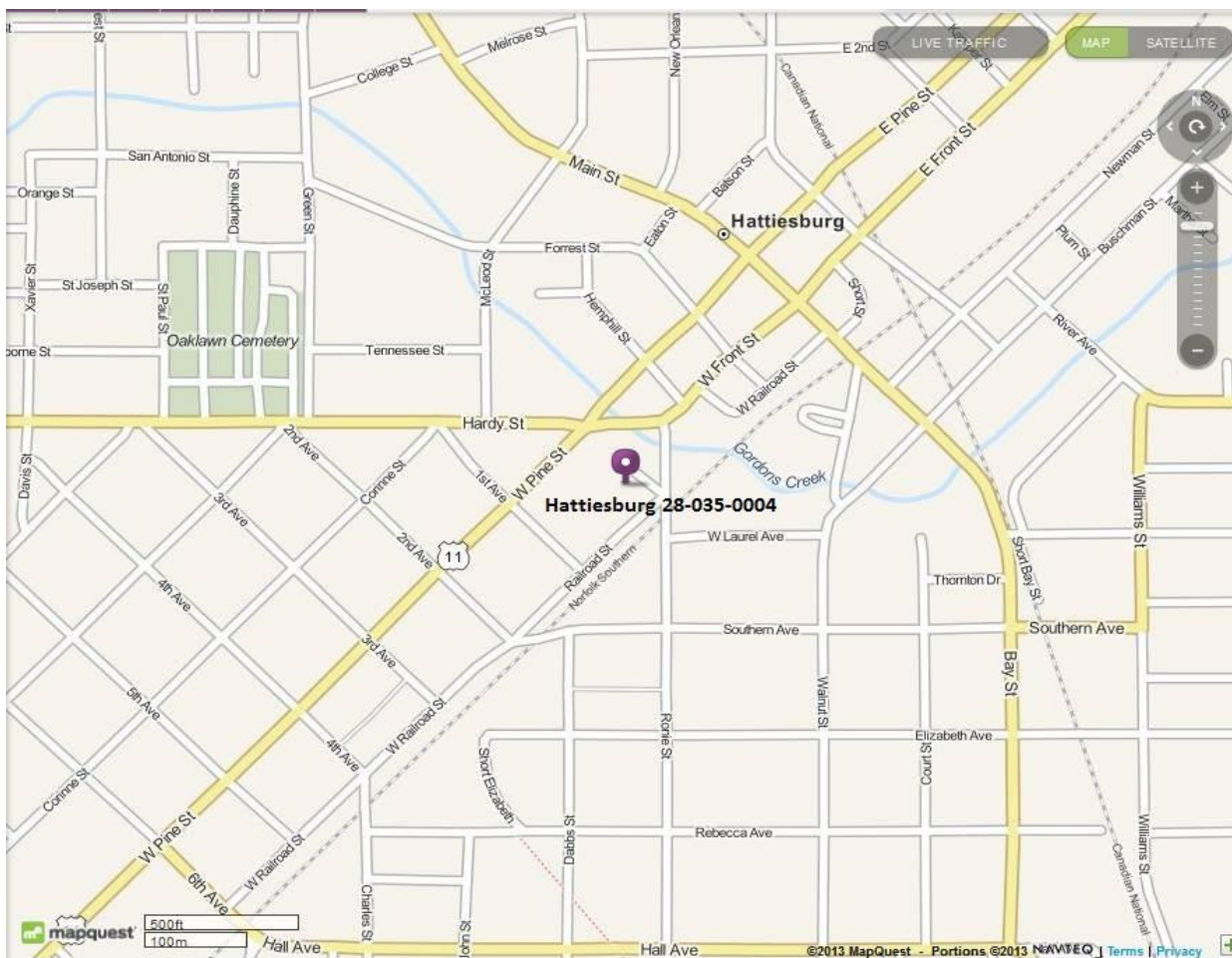
Hattiesburg-East (2024)



Hattiesburg-West (2024)



Hattiesburg-28-035-0004 (2024)



PASCAGOULA (CHEROKEE)



Pascagoula Cherokee-North (2024)



Pascagoula Cherokee-South (2024)



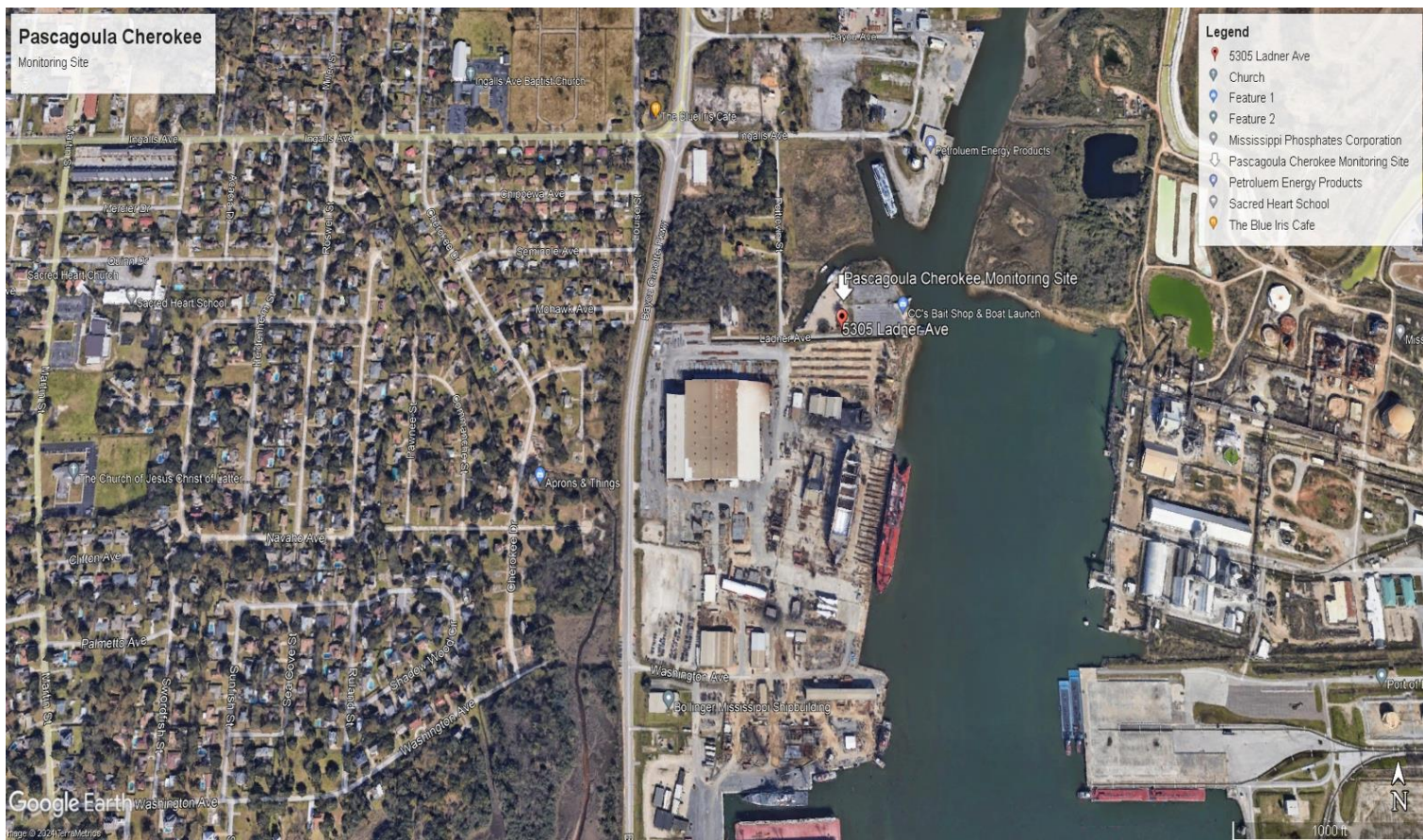
Pascagoula Cherokee-East (2024)



Pascagoula Cherokee-West (2024)



Pascagoula Cherokee-28-059-0007 (2024)



10.0 US Census Information

Annual Estimates of the Resident Population for Metropolitan Statistical Areas in the United States and Puerto Rico:			
Geographic Area	April 1, 2020 Estimates Base	Population Estimate (as of July 1)	
		2020	2021
United States	331,449,281	331,501,080	331,893,745
Gulfport-Biloxi, MS Metro Area	416,259	416,312	418,082
Hattiesburg, MS Metro Area	172,231	172,287	173,078
Jackson, MS Metro Area	591,978	590,626	587,202
Memphis, TN-MS-AR Metro Area	1,337,779	1,337,311	1,336,103

Note: The estimates are developed from a base that incorporates the 2020 Census, Vintage 2020 estimates, and (for the U.S. only) 2020 Demographic Analysis estimates. For population estimates methodology statements, see <http://www.census.gov/programs-surveys/popest/technical-documentation/methodology.html>. The estimates feature geographic boundaries from the Vintage 2020 estimates series; the geographic boundaries for these 2021 population estimates are as of January 1, 2020. The Office of Management and Budget's statistical area delineations for metropolitan, micropolitan, and combined statistical areas, as well as metropolitan divisions, are those issued by that agency in March 2020.

Suggested Citation:

Annual Estimates of the Resident Population for Metropolitan Statistical Areas in the United States and Puerto Rico: April 1, 2020 to July 1, 2021 (CBSA-MET-EST2021-POP)

Source: U.S. Census Bureau, Population Division

Release Date: March 2022

11.0 Regional Monitoring Agreement



LEE HARRIS
MAYOR

SHELBY COUNTY HEALTH DEPARTMENT



Public Health
Formal, Flexible, Forward,
Shelby County Health Department

MICHELLE A. TAYLOR, MD DRPH, MPA
HEALTH DIRECTOR & OFFICER

May 9, 2024

Ms. Michelle Walker Owenby, Air Director
Tennessee Department of Environment and Conservation Air Pollution Control Division
Davy Crockett Tower
500 James Robertson Parkway, 7th Floor
Nashville, Tennessee 37243

Mr. Jaricus Whitlock, P.E., Chief, Air Division
Mississippi Department of Environmental Quality
Office of Pollution Control
P.O. Box 2261
Jackson, Mississippi 39225

Demetria Kimbrough, Associate Director, Office of Air Quality
Division of Environmental Quality
Arkansas Department of Energy and Environment
5301 Northshore Drive
North Little Rock, AR 72118

Dear All,
In accordance with the provisions of the Memorandum of Agreement (MOA) signed in May and June of between the Shelby County Health Department (SCHD), Mississippi Department of Environmental Quality (MDEQ), and the Arkansas Department of Energy and Environment-Division of Environmental Quality (DEQ), this letter serves as a notification that each respective agency in the MOA have been contacted by the SCHD. Although no changes have occurred, there are a few planned changes later in the year (see chart below) within the SCHD and DEQ portions of the network. With this MOA, all agencies are meeting EPA monitoring requirements.

If you have any questions, please call me at (901) 222-9193.

Sincerely,

Kasia Smith Alexander
Bureau Director, Environmental Health and Sustainability Bureau
Shelby County Health Department

Mission

To promote, protect and improve the health of ALL in Shelby County.

814 Jefferson Avenue ♦ Memphis, TN 38105 ♦ 901 222-9000 ♦ www.shelbytnhealth.com

**MEMORANDUM OF AGREEMENT
ON AIR QUALITY MONITORING FOR CRITERIA
POLLUTANTS FOR
THE MEMPHIS, TN- MS- AR
METROPOLITAN STATISTICAL AREA (MSA)**

Participating Agencies:

Shelby County Health Department (SCHD)
Air Pollution Control Program

Mississippi Department of Environmental Quality (MDEQ)
Office of Pollution Control, Air Division

Arkansas Department of Energy and Environment
Division of Environmental Quality (DEQ)

PURPOSE / OBJECTIVE / GOALS

The purpose of this Memorandum of Agreement (MOA) is to inform the entities of the Memphis, Tennessee-Mississippi-Arkansas Metropolitan Statistical Area of monitoring network changes. The MOA between SCHD, MDEQ, and DEQ is to collectively meet United States Environmental Protection Agency (EPA) minimum monitoring requirements for particles of an aerodynamic diameter of 10 micrometers and less (PM_{2.5}), and ozone; as well as other criteria pollutants air quality monitoring deemed necessary to meet the needs of the MSA as determined reasonable by all parties. This MOA will formalize and reaffirm the collective agreement in order to provide adequate criteria pollutant monitoring for the Memphis, TN-MS-AR MSA as required by 40 CFR 58 Appendix D, Section 2, (e).

PM_{2.5} MSA monitoring network include:

<u>County</u>	<u>Federal Referenced Method PM_{2.5}</u>	<u>Federal Equivalent Method PM_{2.5}</u>	<u>Continuous PM_{2.5}</u>	<u>Speciation PM_{2.5}</u>	<u>Collocated PM_{2.5}</u>
Shelby County, TN SCHD	4 (includes 2 at Alabama, 1 at NCore, and 1 at the Near Road station*)	3*		1	2
Crittenden County, AR DEQ	1	1**	1		
DeSoto County, MS MDEQ		1			

*The SCHD plans to replace two FRM PM_{2.5} samplers with a T640x at Alabama Ave, later this year. Plans also include adding a T640x at Near Rd site.
**The DEQ has added a T640 at the Marion, AR site.

Criteria Air Pollutant MSA monitoring network include:

<u>County</u>	<u>PM₁₀</u>	<u>PM_{10-2.5}</u>	<u>O₃</u>	<u>NO_x/NO_y/NO/NO₂</u>	<u>CO</u>	<u>SO₂</u>
Shelby County, TN SCHD	4 (1 TEOM at Alabama Ave., 3-T640x at NCore, Near Rd., & Alabama Ave***)	1	3	3 (includes 1 NO/NO ₂ /NO _x at Near Road Station, 1 NO/NO _y (trace) at NCore/, 1 True NO ₂ (trace) at NCore-PAMS)	2 (includes 1 trace at NCore and 1 at the Near Road Station)	1 (trace at NCore)
Crittenden County, AR DEQ			1	1		
DeSoto County, MS MDEQ			1			

***The SCHD plans to replace the continuous PM₁₀ TEOM with a T640x at Alabama Ave, and add PM₁₀ at the Near Rd. site with a new T640x later this year. After the replacement, there will be three PM₁₀ samplers (all T640x), two FRM PM_{2.5} samplers, and three FEM PM_{2.5} (same T640x) samplers operating in Shelby County.

RESPONSIBILITIES / ACTIONS

Each of the parties to this Agreement is responsible for ensuring that its obligations under the MOA are met. As conditions warrant, the affected agencies may conduct telephone conference calls, meetings, or other communications to discuss monitoring activities for the MSA. Each affected agency shall inform the other affected agencies via telephone or email of any monitoring changes occurring within its jurisdiction of the MSA at its earliest convenience, after learning of the need for the change or making the changes. Such unforeseen changes may include evictions from monitoring sites, destruction of monitoring sites due to natural disasters, or any occurrences that result in an extended (greater than one quarter) or permanent change in the monitoring network.

LIMITATIONS

- All commitments made in this MOA are subject to the availability of appropriated funds and each agency's budget priorities. Nothing in this MOA obligates SCHD, MDEQ, or DEQ to expend appropriations or to enter into any contract, assistance agreement, interagency agreement or other financial obligation.
- This MOA is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between parties to this agreement will be handled in accordance with applicable laws, regulations, and procedures, and will be subject to separate agreements that will be affected in writing by representatives of the parties.
- This MOA does not create any right or benefit enforceable by law or equity against SCHD, MDEQ, or DEQ, their officers or employees, or any other person. This MOA does not apply to any entity outside SCHD, MDEQ, or DEQ.
- No proprietary information or intellectual property is anticipated to arise out of this MOA.

TERMINATION

This Memorandum of Agreement may be revised upon the mutual consent of SCHD, MDEQ and DEQ. Each party reserves the right to terminate this MOA. A thirty (30) day written notice must be given prior to the date of termination.

12.0 Appendix: A

2024 Siting Criteria and Residence Time Summary

AQS #	Site Name:	Parameter	Probe Tubing and Fittings	Probe Rain Shield Material	Height of Probe from ground to Inlet (meters)	Residence Time Seconds	Nearest Road/ Meters	Obstructions < 10 Meters	Tree Drip Line < 10 Meters	270 Degrees Unrestricted Airflow (yes/no)
28-011-0002	Cleveland	Ozone	Teflon	Stainless	4.5 m	4.47s	Shumate Circle / 63.2 m	No	No	Yes
28-011-0002	Cleveland	PM	N/A	N/A	4.2 m	N/A	Shumate Circle / 62.2 m	No	No	Yes
28-033-0002	Hernando	Ozone	Teflon	Stainless	4.5 m	4.58 s	Vaiden Dr / 72.5 m	No	No	Yes
28-033-0002	Hernando	PM	N/A	N/A	4.2 m	N/A	Vaiden Dr / 71.5 m	No	No	Yes
28-045-0003	Waveland	Ozone	Teflon	Stainless	5.0 m	4.26 s	Bering St / 16.92 m	No	No	Yes
28-045-0003	Waveland	PM	N/A	N/A	4.75 m	N/A	Bering St / 14.5 m	No	No	Yes
28-047-0008	Gulfport YC	Ozone	Teflon	Stainless	4.10 m	4.28 s	Hancock AVE / 45 m	No	No	Yes
28-047-0008	Gulfport YC	PM	N/A	N/A	4.00 m	N/A	Hancock AVE / 45 m	No	No	Yes
28-049-0021	Hinds CC	Ozone	Teflon	Stainless	4.5 m	4.57 s	Medgar Evers Dr / > 300 m	No	No	Yes
28-049-0021	Hinds CC	PM	N/A	N/A	4.0 m	N/A	Medgar Evers Dr / > 300 m	No	No	Yes
28-075-0003	Meridian	Ozone	Teflon	Stainless	4.5 m	4.60 s	53rd Ave / 22 m	No	No	Yes
28-035-0004	Hattiesburg	PM	N/A	N/A	3.5 m	N/A	Ronie St. / 13.72 m	No	No	Yes
28-081-0005	Tupelo	Ozone	Teflon	Stainless	4.35 m	3.69 s	W. Jackson St / 4.63 m	No	No	Yes
28-049-0020	NCore	Ozone	Teflon	Stainless	4.5 m	5.18 s	N. West St./ 42 m	No	No	Yes
28-049-0020	NCore	SO2	Teflon	Stainless	4.5 m	6.26 s	N. West St./ 42 m	No	No	Yes
28-049-0020	NCore	CO	Teflon	Stainless	4.5 m	2.57 s	N. West St./ 42 m	No	No	Yes
28-049-0020	NCore	PM	N/A	N/A	4.0 m	N/A	N. West St./ 42 m	No	No	Yes
28-059-0006	Pascagoula	Ozone	Teflon	Stainless	4.57 m	3.86 s	LT Eugene J Majure Dr./ 12.95 m	No	No	Yes
28-059-0006	Pascagoula	SO2	Teflon	Stainless	4.57 m	5.71 s	LT Eugene J Majure Dr./ 12.95 m	No	No	Yes
28-059-0006	Pascagoula	NOx	Teflon	Stainless	4.57 m	7.40 s	LT Eugene J Majure Dr./ 12.95 m	No	No	Yes
28-059-0006	Pascagoula	PM	N/A	N/A	4.42 m	N/A	LT Eugene J Majure Dr./ 12.95 m	No	No	Yes
28-059-0007	Pascagoula	*TRS	Teflon	Stainless	4.55m	5.59 s	Poitevin St/ 383.89 m	No	No	Yes
28-059-0007	Pascagoula	PM10	N/A	N/A	4.25 m	N/A	Poitevin St/ 383.89 m	No	No	Yes

*TRS - Total Reduced Sulfur